But λ 5005 was clearly a single line.   There was no trace of any bright line or series of bright lines close to it on either side; no trace of a fluting properly so-called.   The entire line, fringes and all, was only a fraction of a tenth-metre in total breadth; all that was remarked about it was :—

(1) That it was a single, not a double, line.

(2) That it was not quite sharp at either edge.

(3) That it was more shaded on the more refrangible edge than on the less refrangible.

The power of the eyepiece used was 14 on a viewing-telescope of 10·5 inches focal length.

The observation therefore does not afford any strong confirmation of Mr. Lockyer's view that this line in the spectrum of nebulæ is due to the fluting of magnesium, but at the same time it is not absolutely inconsistent with it.

Observations of the Planet Iris and Comparison Stars, made with the Meridian Circle at Dunsink.   By Arthur A. Rambaut, M.A., Assistant Astronomer at Dunsink Observatory.

(*Communicated by Sir R. S. Ball.*)

Early in September 1888, we received from Dr. Gill a list of twenty-eight stars, which he proposed to use as comparison stars for a determination of the parallax of the planet *Iris*, with a request that we should determine their places with our meridian circle, and that we should at the same time procure as many meridian observations as possible of the planet.

This work was commenced at once on receipt of Dr. Gill's communication, but owing to the unfavourable state of the weather the list, to which two stars were added during the progress of the work, was not completed till January 10 of this year.

The places of the stars given below are strictly differential, both in right ascension and declination, as the clock error and the equator point of the circle were always determined by observations of a few stars selected from the *Berliner Jahrbuch*. These stars, which were chosen as being conveniently situated in regard to the time of their culmination, and because their zenith distances did not greatly differ from that of Dr. Gill's stars, are contained in the following list :—

Λ A 2

List of Standard Stars.

No.	No. in Fund. Cat.	Name.	Mean R.A. 1888·0.	Mean Decl. 1888·0.
			h m s	° ′ ″
1	15	ε Piscium	0 57 7·815	+ 7 17 13·22
2	22	η Piscium	1 25 29 397	+14 46 5·08
3	25	o Piscium	1 39 28·734	+ 8 35 37·31
4	27	α Triang.	1 46 41·867	+29 1 58·17
5	30	β Arietis	1 48 27·172	+20 15 36·63
6	42	μ Ceti	2 38 53·207	+ 9 38 26·70
7	44	41 Arietis	2 43 23·480	+26 47 53·75
8	47	α Ceti	2 56 25·448	+ 3 38 59·23
9	359	δ Arietis	3 5 13·470	+19 18 8·83

The azimuth error of the instrument was on every occasion determined by observations of *Polaris* at upper culmination, in combination with the clock stars observed.   The other errors of the instrument were determined, and the observations reduced, in the manner described in the Fourth and the Sixth Parts of the *Dunsink Observations and Researches*.   In addition to the observations of standard stars in zenith distance, readings of the nadir point of the circle were also taken, two before and two after, each series of observations.   The equator point, as determined from these nadir readings, is given in the eighth column of the *Table of Instrumental Corrections*.   In obtaining this quantity the latitude of the meridian circle is taken as being 53° 23′ 13″·1, as determined from a series of observations of *Polaris* above and below the pole, made during the winter of 1887-88, an account of which will shortly be published in the *Scientific Transactions of the Royal Dublin Society*.   The seventh column of the same table contains this quantity as derived from observations of standard stars, and this alone has been used in the reductions.

The numbers in the ninth column refer to the list of standard stars given above, and show what stars were observed on each night.

The symbol (α) or (δ) following any number implies that the star corresponding to this number was observed only in right ascension or declination as the case may be.

Table of Instrumental Corrections.

The values of the various quantities in this table are computed for the epoch $2^h\cdot0$ Sidereal Time.

Date. 1888.	Clamp.	Incl.	Azim.	Collim.	$\Delta t + b \sec \phi$.	Equator Point (S.)	(N.)	Standard Stars.
		s	s	s	s	° ′ ″	″	
Sept. 5	W	+0·202	−0·206	−0·048	−197·28	171 36 37·59	37·56	1, 2, 6, 7
7		+0·200	−0·246	−0·046	−200·93	38·09	38·10	1, 2, 6, 8
12		+0·163	−0·291	−0·052	− 29·28	36·81	36·85	1 (δ), 2, 4, 7, 8 (α)
16		+0·166	−0·143	−0·016	− 35·76	36·49	36·52	1, 2, 7, 8
26		+0·180	−0·082	+0·003	− 53·09	36·54	36·71†	1, 2
Oct. 1		+0·202	−0·156	[0·000]	− 62·19	39·22	††	2, 4, 7, 8
3		+0·138	−0·100	+0·003	− 65·22	38·83	††	1 (α), 2, 3, 6
4		+0·139	−0·055	+0·019	− 66·70	40·16	40·59	1 (α), 2 (δ), 3, 7, 8
13	E	+0·086	−0·098	−0·144	− 74·92	171 37 26·73	26·62	1, 2, 6, 7
14		+0·061	−0·153	−0·180	− 75·68	26·75	26·35	1, 2, 6, 7
20		+0·067	−0·069	−0·136	− 80·47	24·94	24·97	1, 2, 5, 6, 7
22		+0·089	−0·014	−0·125	− 82·17	26·10	25·98	1, 2, 6, 7
30		+0·182	−0·198	−0·188	− 92·09	27·71	27·47	1, 2, 6, 7
Nov. 16		+0·092	−0·230	−0·166	−118·90	25·86	25·97†	1, 2
20		+0·123	−0·266	−0·169	−124·42	27·24	27·42	2, 3, 6, 7
25		+0·112	−0·132	−0·018*	−130·17	25·34	25·03	1, 2, 6, 7
27		+0·136	−0·094	+0·008	133·30	26·67	25·97	1, 2, 6, 7

Date.	Clamp.	Incl.	Azim.	Collim.	$\Delta t + b \sec \phi$.	Equator Point (S.)	(N.)	Standard Stars.
		s	s	s	s	° ′ ″	″	
1888. Nov. 30		+0·091	[−0·162]	−0·024	− 17·58	171 37 26·11	††	5, 6, 7
Dec. 3		+0·049	−0·231	−0·051	− 21·04	23·51	22·78	2, 5, 6 (δ), 7
8		+0·114	−0·186	−0·019	− 26·43	26·17	25·68	1, 2, 6, 7
9		+0·109	−0·181	−0·017	− 27·54	26·32	26·15	1, 2, 6, 7
11	W	+0·040	[−0·211]**	+0·077	− 29·90	171 36 38·16	38·04†	6, 7, 8, 9
16		+0·040	−0·161	+0·028	− 35·21	38·77	38·55	2, 3, 6, 9
20		−0·016	−0·146	+0·083	− 40·07	36·71	37·26	2, 3, 6, 7
24		+0·015	−0·121	+0·064	− 45·33	37·38	37·20	2, 3, 6, 7
26		+0·016	−0·286	+0·004	− 47·83	38·49	38·23	2, 3, 6, 7
27		−0·007	−0·210	+0·025	− 49·26	38·25	37·62	2, 3, 6, 7
28	E	+0·010	−0·276	−0·002	− 50·58	171 37 24·39	23·52	2, 3, 6, 7
29		+0·038	−0·220	+0·026	− 51·86	24·27	23·79	2, 3, 6, 7
30		+0·023	−0·191	+0·011	− 53·03	25·45	24·95	2, 3, 6, 7
1889. Jan. 3		−0·052	−0·195	+0·033	− 57·17	24·81	23·76	2, 3, 6, 7
5	W	−0·105	−0·270	+0·026	− 59·07	171 36 37·76	37·08	2, 3, 6, 7
10	W	−0·083	−0·260	+0·044	− 63·96	37·68	36·45	2, 3, 6, 9

* Spider lines cleaned on November 24.
** Determined on December 10.

† Only two determinations of nadir.
†† Nadir not observed.

Probable Error of the Resulting Places.

I have computed the probable error of a single observation of right ascension from the whole series of results, and I find that for a star of declination $+20°$ $30'$ (the mean declination of Dr. Gill's list) it is

$$\pm 0^s\!\cdot\!032,$$

which corresponds to a probable error of $\pm 0^s\!\cdot\!030$ at the equator.

In declination the probable error of a single observation as computed from the whole series is

$$\pm 0''\!\cdot\!405.$$

Separate Results.

No.	D.M.	Date.	Clamp.	R.A. 1880·0.	Decl. 1880·0.	Remarks.
		1888.		h m s	° ′ ″	
1	+17°, 307	Sept. 5	W	1 57 34·09	+17 42 52·7	
		7	W	33·99	53·8	
		Oct. 13	E	33·91	51·9	
		14	E	33·97	52·1	
		Dec. 24	W	33·95	52·3	
		27	W	33·98	52·3	
		29	E	33·95	51·7	
				1 57 33·960	+17 42 52·40	
2	+19°, 324	Sept. 12	W	2 0 4·00	+20 3 26·8	
		16	W	3·91	25·8	
		Oct. 20	E	3·88	25·9	
		22	E	3·97	26·0	
		Dec. 26	W	3·92	25·9	
		28	E	3·91	25·2	
				2 0 3·932	+20 3 25·93	
3	+17°, 315	Sept. 26	W	2 1 36·99	+17 29 43·8	See note (*a*).
		Oct. 1	W	37·06	43·8	Very unsteady.
		30	E	37·04	44·1	
		Nov. 16	E	37·03	[45·2]	See note (*b*).
		Dec. 30	E	36·99	43·8	
		1889. Jan. 10	W	37·09	43·0	Through clouds
				2 1 37·033	+17 29 43·70	

No.	D.M.	Date.	Clamp.	R.A. 1880·0.	Decl. 1880·0.	Remarks.
		1888.		h m s	° ′ ″	
4	+ 16°, 247	Oct. 3	W	2 3 14·05	+ 16 41 56·9	See note (c).
		4	W	13·78	54·7	
		13	E	13·93	55·1	
		14	E	13·81	54·3	Rather unsteady.
				2 3 13·892	+ 16 41 55·25	
5	+ 19°, 329	Sept. 5	W	2 3 29·90	+ 19 49 2·4	
		7	W	29·95	4·2	
		Dec. 16	W	29·85	2·4	
		29	E	29·87	1·4	
				2 3 29·892	+ 19 49 2·60	
6	+ 18°, 277	Nov. 20	E	2 4 25·07	+ 18 58 —	
		Dec. 20	W	25·07	18·1	Dark field.
		24	W	25·03	18·0	Dark field.
		28	E	25·08	18·1	
		1889. Jan. 3	E	25·05	18·0	
				2 4 25·060	+ 18 58 18·05	
7	+ 20°, 341	1888. Oct. 22	E	2 5 6·09	+ 20 50 57·2	
		Dec. 26	W	6·08	57·6	
		27	W	6·04	56·9	
		30	E	5·95	56·0	
				2 5 6·040	+ 20 50 56·92	
8	+ 21°, 298	Nov. 27	E	2 6 2·89	+ 21 27 25·7	
		30	E	2·94	24·9	
		Dec. 11	W	2·89	26·4	
		1889. Jan. 5	W	2·88	26·7	
				2 6 2·900	+ 21 27 25·92	
9	+ 20°, 348	1888. Sept. 16	W	2 6 31·90	+ 20 41 5·0	
		26	W	—	5·5	
		Oct. 20	E	31·78	3·7	
		30	E	31·84	3·0	
		1889. Jan. 10	W	31·90	3·4	
				2 6 31·855	+ 20 41 4·12	

No.	D.M.	Date.	Clamp.	R.A. 1880·0.			Decl. 1880·0.			Remarks.
		1888.		h	m	s	°	′	′	
10	+18°, 283	Sept. 12	W	2	7	38·96	+19	5	23·2	
		Oct. 1	W			38·91			23·0	
		Nov. 25	E			38·89			22·3	
		Dec. 9	E			38·78			21·9	
				2	7	38·885	+19	5	22·60	
11	+21°, 304	Sept. 5	W	2	8	39·57	+22	6	26·0	
		7	W			39·71			25·8	
		Dec. 3	E			39·61			25·6	
		8	E			39·67			26·1	Set hurriedly.
		28	E			39·64			26·0	A ✴ 8·5 mag. s.p.
		29	E			39·58			26·1	
				2	8	39·630	+22	6	25·93	
12	+21°, 317	Oct. 3	W	2	11	26·21	+22	8	33·2	See note (*d*).
		4	W			26·10			35·1	
		13	E			26·14			36·1	
		14	E			26·12			34·7	
				2	11	26·133	+22	8	34·77	
13	+19°, 340	Nov. 20	E	2	11	53·63	+19	22	57·2	Through clouds.
		30	E			53·72			56·4	
		Dec. 11	W			53·67			57·1	
		16	W			53·62			57·0	
		30	E			53·63			56·5	
				2	11	53·654	+19	22	56·84	
14	+21°, 321	Oct. 22	E	2	12	16·91	+21	22	49·4	See note (*e*).
		30	E			16·90			49·7	
		Dec. 20	W			16·77			49·4	Dark field.
		24	W			16·88			49·8	
				2	12	16·865	+21	22	49·57	
15	+22°, 329	Sept. 16	W	2	12	38·52	+22	39	3·5	
		Oct. 1	W			38·42			4·4	
		20	E			38·46			2·6	
		Dec. 9	E			38·37			2·0	
		1889. Jan. 10	W			38·50			2·3	
				2	12	38·452	+22	39	2·96	

No.	D.M.	Date.	Clamp.	R.A. 1880·0.	Decl. 1880·0.	Remarks.
		1888.		h m s	° ′ ″	
16	+19°, 346	Sept. 7	W	2 14 17·86	+19 36 36·9	See note (*f*).
		12	W	17·97	36·2	
		Dec. 3	E	18·01	36·0	Dark field.
		Dec. 26	W	17·95	34·8	See note (*g*).
		1889. Jan. 3	E	17·95	35·5	Dark field.
				2 14 17·948	+19 36 35·88	
		1888.				
17	+22°, 331	Nov. 27	E	2 14 53·79	+22 54 47·6	
		Dec. 8	E	53·96	47·6	
		11	W	53·93	47·2	
		16	W	53·93	47·7	
				2 14 53·902	+22 54 47·52	
18	+20°, 388	Sept. 5	W	2 17 29·95	+20 54 16·6	
		16	W	[30·18]	17·6	See note (*h*).
		Oct. 13	E	29·99	17·5	
		14	E	29·93	17·7	
		Dec. 24	W	29·90	16·9	Dark field.
				2 17 29·943	+20 54 17·26	
19	+24°, 347	Sept. 26	W	2 19 27·20	+24 39 10·7	See note (*i*).
		Oct. 1	W	27·35	12·8	See note (*j*).
		20	E	27·36	10·9	
		Nov. 20	E	27·37	10·4	
				2 19 27·320	+24 39 11·20	
20	+22°, 347	Sept. 7	W	2 20 38·07	+22 22 28·1	
		12	W	37·93	26·9	
		Nov. 25	E	37·93	27·2	
		Dec. 3	E	38·09	27·4	See note (*k*).
		1889. Jan. 10	W	38·01	27·3	See note (*l*).
				2 20 38·006	+22 22 27·38	
		1888.				
21	+23°, 326	Nov. 27	E	2 21 53·25	+24 7 45·1	See note (*m*).
		Dec. 9	E	53·24	45·5	
		11	W	53·27	43·0	
		16	W	53·28	44·6	
				2 21 53·260	+24 7 44·55	

No.	D.M.	Date.	Clamp.	R.A. 1880·0.			Decl. 1880·0.			Remarks.
				h	m	s	°	′	″	
		1888.								
22	+22°, 345	Oct. 3	W	2	22	50·60	+22	58	6·4	Dark field.
		4	W			50·59			6·9	Good.
		13	E			50·55			6·8	Dark field.
		14	E			50·49			6·5	
		1889.								
		Jan. 5	W			50·60			5·8	
				2	22	50·566	+22	58	6·48	
		1888.								
23	+20°, 404	Sept. 16	W	2	22	57·67	+21	5	39·1	
		Nov. 30	E			57·73			38·2	
		Dec. 26	W			57·67			37·7	
		27	W			57·64			37·3	
		28	E			57·72			38·4	See note (*n*).
				2	22	57·686	+21	5	38·14	
24	+24°, 358	Sept. 5	W	2	24	5·78	+24	44	17·4	
		Oct. 30	E			5·78			18·3	
		Dec. 20	W			5·75			17·3	Dark field.
		24	W			5·76			17·1	
		29	E			5·80			17·6	
		30	E			5·78			17·9	
				2	24	5·775	+24	44	17·60	
25	+21°, 349	Sept. 12	W	2	26	1·67	+21	50	17·5	
		Oct. 1	W			1·65			17·4	
		Nov. 20	E			1·66			17·3	Through clouds.
		25	E			1·71			17·3	
				2	26	1·672	+21	50	17·37	
26	+24°, 369	Sept. 16	W	2	28	11·90	+24	24	4·1	
		26	W			11·76			2·5	See note (*o*).
		Dec. 3	E			11·92			3·4	See note (*p*).
		9	E			11·78			4·0	
				2	28	11·840	+24	24	3·50	
27	+22°, 368	Oct. 4	W	2	28	16·64	+22	28	35·1	
		Nov. 27	E			16·59			35·2	
		Dec. 8	E			16·65			35·4	
		11	W			16·59			34·2	
				2	28	16·617	+22	28	34·97	

No.	D.M.	Date.	Clamp.	R.A. 1880·0.	Decl. 1880·0.	Remarks.
		1888.		h m s	° ′ ″	
28	+22°, 372	Sept. 5	W	2 30 18·60	+ 22 33 49·4	
		Oct. 30	E	18·71	50·4	
		Nov. 30	E	18·70	49·5	
		Dec. 24	W	18·68	49·1	
		29	E	18·64	48·8	
		1889. Jan. 5	W	18·70	49·3	
				2 30 18·672	+ 22 33 49·42	
		1888.				
29	+24°, 376	Oct. 20	E	2 30 32·90	+ 24 9 33·3	D.M. + 24°,375 p., 3″ ± n.
		22	E	33·01	33·6	Oct. 20 Δα = 2ˢ·85
		Dec. 16	W	32·95	32·9	,, 22 Δα = 3″·07
		20	W	32·98	33·1	Dec. 30 Δα = 2ˢ·78
		3	E	32·97	33·3	Δα ≈ 2″·90
				2 30 32·962	+ 24 9 33·24	
30	+22°, 375	Nov. 20	E	2 31 25·30	+ 22 38 34·0	
		25	E	25·34	34·0	
		Dec. 26	W	25·32	33·7	Rather unsteady.
		27	W	25·31	33·0	
		28	E	25·32	33·9	Dark field.
				2 31 25·318	+ 22 38 33·72	

Notes.

(*a*) Through thin clouds.

(*b*) Microscopes V. and VI. were read immediately. Then the telescope was set for *Iris,* after which the telescope was re-set by the first two readings, and those of VII. and VIII. taken.

(*c*) Dark field. Faint through clouds.

(*d*) Dark field. Observed across only five wires. Half weight in R.A.

(*e*) Through clouds. Appears brighter than 8ᵐ.

(*f*) A 9ᵐ star f. 6ˢ·5, 2′ ± s.   (*g*) Rather faint for bright field.

(*h*) R.A. very bad. Appears less than 8ᵐ·5. Reject.

(*i*) Through clouds. Faint. Dark field.

(*j*) Through clouds, drifting swiftly by.   (*k*) Very faint through clouds.

(*l*) Faint through clouds. Decl. appeared good as seen once or twice through clear breaks.

(*m*) A star, R.A. 2ʰ 19ᵐ 25ˢ·60, Decl. + 24° 10′ 5″·3, observed on December 8, 1888, by mistake for this.

(*n*) Faint through clouds. Dark field.

(*o*) Through clouds. Dark field.

(*p*) Very faint through clouds. Dark field.

Observations of the Planet Iris.

[The places given in this list are not corrected for annual aberration or parallax.]

Date.	App. R.A.	App. Decl.	Remarks.
1888.	h m s.	° ′ ″	
Sept. 7	2 29 47.89	+23 27 50.9	Ill-defined.
12	32 34.65	+23 49 55.2	Appears slightly reddish. A ✱ 8^m (D.M. +23°, 349) f. 13^s.5, 20″ ± n.
16	34 12.35	+24 3 53.4	
26	35 47.89	+24 22 46.2	Through clouds. Only five wires.
Oct. 1	35 13.05	+24 22 41.9	Ill-defined.
3	34 43.99		Only two wires. Appeared for only a few secs. through clouds.
4	34 26.21	+24 19 18.5	
13	30 18.64	+23 53 30.9	Very well seen. Blue rather than red.
14	29 42.50	+23 49 11.3	
20	25 37.76	+23 17 33.7	
22	24 7.72	+23 4 54.5	Definition good.
30	17 45.70	+22 5 20.8	
Nov. 16	5 52.90		Only three wires. Scarcely visible.
20	4 4.09	+18 58 49.8	D.M. + 18°, 277, f. 24^s.11, 17″ ± s.
25	2 32.47	+18 18 3.6	
27	2 10.34	+18 2 53.0	
30	1 53.65	+17 51 31.3	
Dec. 8	2 47.36	+16 54 8.1	
9	3 3.94	+16 49 14.0	D.M. + 16°, 247, f. 11^s ± , 7′ ± s. in same field.
11	3 44.19	+16 40 10.1	Only two microscopes (V. and VI.) read at once. I afterwards reset by means of these, and read VII. and VIII.
26	13 5.74	+16 1 59.7	Only five wires. Only one microscope (V.) read until after the transit of 41 *Arietis.*
27	13 58.25	+16 1 12.8	
28	14 52.66	+16 0 38.0	A 9^m.5 ✱ p. 2^s.5, 1′ ± n. not in D.M.
29	15 48.54	+16 0 14.3	
30	16 46.29	+16 0 2.5	Appeared about 8^m.5 through a slight haze.
1889.			
Jan. 10	2 29 5.59	+16 9 45.1	Another star of same mag. (D.M. + 15°, 354) 26^s.75 f. from 2′ to 3′ south.

On December 3 the star D.M. + 17°,315 was observed by mistake for *Iris.* The resulting place is R.A. 2^h 1^m 37^s.03, Decl. + 17° 29′ 43″.4.

Mean Places of Comparison Stars for Heliometer Observations of Iris.

No.	Mag.	Mean R.A. 1888·0 (h m s)	Ann. Prec. (s)	Sec. Var. (s)	No. of Obs.	Mean Decl. 1888·0 (° ′ ″)	Ann. Prec. (″)	Sec. Var. (″)	References.
1	7·0	1 57 33·960	+3·28207	+0·01681	7	+17 42 52·40	+17·4720	−0·2425	Arm. 454, P. 243, T. 673, W. 1331, 7 yr. 136, 9 yr. 192.
2	7·7	2 0 3·932	·31666	·01837	6	20 3 25·93	17·3637	·2494	W. 1397.
3	7·3	2 1 37·033	·28576	·01673	6, 5	17 29 43·70	17·2953	·2499	Gl. 465, P. 257, W. 1436.
4	6·8	2 3 13·892	·27789	·01626	4	16 41 55·25	17·2234	·2521	W. 1482.
5	7·5	2 3 29·892	·31972	·01824	4	19 49 2·60	17·2114	·2558	W. 1.
6	6·0	2 4 25·060	·30991	·01770	5, 4	18 58 18·05	17·1699	·2567	Arm. 473, B. 296, B.A.C. 669, P. 267, T. 702, W. 19, Y. 977, 7 yr. 139, 9 yr. 198.
7	7·5	2 5 6·040	·33681	·01894	4	20 50 56·92	17·1391	·2600	Gl. 479, P. 1, R C₂ 265, W. 43.
8	8·5	2 6 2·900	·34713	·01937	4	21 27 25·92	17·0959	·2625	W. 75.
9	5·5	2 6 31·855	·33722	·01884	4, 5	20 41 4·12	17·0737	·2625	Arm. 482, B. 303, P. 11, R C₂ 272, T. 718, W. 87, Y. 996, 12 yr. 193, 7 yr. 141.
10	7·2	2 7 38·885	·31706	·01780	4	19 5 22·60	17·0223	·2629	Arm. 486, T. 728, W. 130.
11	7·8	2 8 39·630	·36159	·01982	6	22 6 25·93	16·9753	·2684	
12	8·3	2 11 26·133	·36766	·01986	4	22 8 34·77	16·8449	·2735	W. 233.
13	6·0	2 11 53·654	·32847	·01801	5	19 22 56·84	16·8230	·2713	Arm. 502, Arm.₂ 296, B. 320, P. 49, Pond (1830) 72, R C₂ 282, Y. 1029, 9 yr. 210, 12 yr. 204, 7 yr. 148.
14	8·0	2 12 16·865	·35809	·01934	4	21 22 49·57	16·8046	·2744	W. 241.

No.	Mag.	Mean R.A. 1888·0	Ann. Prec.	Sec. Var.	No. of Obs.	Mean Decl. 1888·0	Ann. Prec.	Sec. Var.	References.
		h m s	s	s		° ′ ″	″	″	
15	6·0	2 12 38·452	+3·37764	+0·02022	5	+22 39 2·96	+16·7874	−0·2765	Arm. 297.
16	8·5	2 14 17·948	·33590	·01816	5	19 36 35·88	16·7077	·2762	
17	7·8	2 14 53·902	·38623	·02040	4	22 54 47·52	16·6786	·2813	
18	8·5	2 17 29·943	·36079	·01901	4, 5	20 54 17·26	16·5512	·2837	W. 368.
19	7·3	2 19 27·320	·42322	·02166	4	24 39 11·20	16·4539	·2924	
20	7·8	2 20 38·006	·38938	·02000	5	22 22 27·38	16·3947	·2916	W. 444, Y. 1081.
21	8·6	2 21 53·260	·42000	·02124	4	24 7 44·55	16·3313	·2965	
22	6·0	2 22 50·566	·40321	·02041	5	22 58 6·48	16·2826	·2966	Arm.$_2$ 319, R. 631, R.$_2$ 1267.
23	7·5	2 22 57·686	·37371	·01911	5	21 5 38·14	16·2766	·2945	W. 503.
24	6·2	2 24 5·775	·43476	·02167	6	24 44 17·60	16·2184	·3016	Arm. 544, W. 525, Y. 1101.
25	8·0	2 26 1·672	·39122	·01960	4	21 50 17·37	16·1184	·3011	W. 587, Y. 1122.
26	8·2	2 28 11·840	·43788	·02136	4	24 24 3·50	16·0048	·3090	W. 635.
27	8·1	2 28 16·617	·40589	·02001	4	22 28 34·97	16·0006	·3063	W. 637.
28	7·6	2 30 18·672	·41125	·02004	6	22 33 49·42	15·8926	·3102	W. 688.
29	7·0	2 30 32·962	·43869	·02117	5	24 9 33·24	15·8799	·3130	Arm. 565, Arm.$_2$ 338, B. 361, P. 128, R C$_2$ 314, T. 867, W. 693, Y. 1150, 12 yr. 224.
30	8·3	2 31 25·318	+3·41471	+0·02007	5	+22 38 33·72	+15·8331	−0·3123	W. 710.

The abbreviations in the last column are the same as those used in the second Armagh Catalogue, which is here denoted by Arm.$_2$

Dunsink : 1889, February 26.

Observations of the Variable Star S (10) Sagittæ.
By J. E. Gore.

The following are my observations of this short period variable during the year 1888. They form a continuation of the observations given in *Monthly Notices* for March 1888.

The comparison stars are as before.

		Mag.
11 Sagittæ	5·8
DM. + 16°, 4086	7·0

Date.	Dublin M.T. h m	Mag.	Date.	Dublin M.T. h m	Mag.
1888, Jan. 2	6 22	6·25	1888, Oct. 22	10 10	6·5
5	5 45	5·65	Nov. 6	7 55	6·16
8	6 10	5·7	9	7 37	6·16
Oct. 5	10 15	6·25	13	7 30	5·85
10	10 40	5·7	14	6 45	6·16
12	10 15	6·0	25	6 48	6·28
13	7 35	6·16	27	8 55	5·7
13	10 42	6·25	30	6 44	5·9
14	6 58	6·28	Dec. 7	7 34	5·8
16	10 15	5·7	8	8 2	5·8
20	9 25	6·25	9	6 36	5·9
22	7 52	6·4	26	6 40	5·9

Note on a Red Star. By E. J. Stone, M.A., F.R.S.,
Radcliffe Observer.

Whilst searching for Faye's Comet on the night of 1888, November 27, which could not be seen with the 10-inch Barclay equatorial, a star was noticed by Mr. Bellamy as " a vividly red coloured star."

On February 9, 1889, Mr. Robinson looked for the above star, and made the following observations : " This star was easily picked up from its colour contrasting with all the other stars in the vicinity. It is undoubtedly red. A white star, slightly fainter, precedes 4′ N.; also a bright white star follows 6′ S. The star turns out to be Lalande 16320, and the following are the positions of the star and those compared with it on 1889, February 9.

	Approx. R.A. 1889·0. h m s	Approx. N.P.D. ° ′ ″	Colour.	Observed Magnitude.
Lamont 22	8 13 31	86 49 19	White	8·75
Lalande 16320	8 14 18	86 53 13	Red	8·5
Lalande 16341	8 14 54	86 59 4	White	7·0

Radcliffe Observatory, Oxford :
1889, *March* 7.